

AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF THE CLAIMS

Cancel claims 1-9, without prejudice.

Claims 1-9 Canceled

10. (New) A method for imparting corrosion-resistance to a metal substrate, the method comprising:

forming a liquid coating composition including (i) a liquid medium, (ii) zinc alloy in flake form comprising greater than 50 weight percent zinc in the flake, and a balance of less than 50 weight percent of additional alloy metal, and (iii) silane binding agent;

applying the liquid coating composition to the substrate to provide, upon heating, a coating weight of from about 500 to about 9,000 mg/ft² of coating on the coated substrate; and

heating the applied coating on the substrate to a temperature up to about 700°F for a time period of at least about 10 minutes, to thereby form a corrosion-resistant coating on the substrate that imparts corrosion-resistance thereto.

11. (New) The method of claim 10 wherein the silane binding agent constitutes from about 3 weight percent to about 20 weight percent of the total liquid coating weight, prior to heating.

12. (New) The method of claim 10 wherein the silane binding agent is an epoxy functional silane.

13. (New) The method of claim 10 wherein the liquid medium is water and constitutes from about 20 weight percent to about 70 weight percent of the total liquid coating weight, prior to heating.

14. (New) The method of claim 10 wherein the heating is performed in an oven by exposing the substrate and coating applied thereon, to an oven air temperature of at least about 450°F.

15. (New) The method of claim 14 wherein the oven air temperature is 650°F or more.

16. (New) The method of claim 10 wherein heating is performed for a period of from about 10 minutes to about 45 minutes.

17. (New) The method of claim 10 wherein the applying of the coating composition is performed by immersing the substrate to be coated, in the liquid coating composition.

18. (New) A method of producing a corrosion-resistant coated substrate, the method comprising:

providing a substrate;

forming a liquid coating composition including (i) from about 20 weight percent to about 70 weight percent water of the total liquid coating composition weight, (ii) zinc alloy in flake form comprising greater than 50 weight percent zinc in the flake, and a balance of less than 50 weight percent of additional alloy metal;

applying the liquid coating composition on to the substrate; and

heating the applied coating on the substrate to a temperature of from about 450°F to about 700°F for a time period of at least about 10 minutes, to thereby produce a corrosion-resistant coated substrate.

19. (New) The method of claim 18 wherein the liquid coating composition further includes (iii) from about 3 weight percent to about 20 weight percent of a silane binding agent.

20. (New) The method of claim 19 wherein the silane binding agent is an epoxy functional silane.

21. (New) The method of claim 18 wherein the heating is performed in an oven utilizing an oven air temperature of at least about 450°F.

22. (New) The method of claim 18 wherein the heating is performed for a time

period of from about 10 minutes to about 45 minutes.

23. (New) A method of producing a coated substrate exhibiting corrosion-resistant properties, the method comprising:

providing a substrate;

forming an anti-corrosion liquid coating formulation including (i) water in an amount of from about 20 weight percent to about 70 weight percent, (ii) zinc alloy in flake form comprising greater than 50 weight percent zinc in the flake, and a balance of less than 50 weight percent of additional alloy metal, (iii) from about 3 weight percent to about 20 weight percent of a silane binding agent;

forming a layer of the liquid formulation on the substrate to provide, upon heating, a coating weight of at least 1,500 mg/ft² of coating on the substrate; and

heating the applied layer of the liquid formulation to thereby form the coated substrate.

24. (New) The method of claim 23 wherein heating is performed in an oven at a temperature of from about 450°F to about 700°F for a time period of at least about 10 minutes.

25. (New) The method of claim 23 wherein the liquid formulation further includes (iv) from about 1 weight percent to about 30 weight percent of organic liquid.

26. (New) The method of claim 23 wherein the liquid formulation further includes (iv) from about 0.01 to about 10 weight percent wetting agent.

27. (New) The method of claim 23 wherein the liquid formulation further includes (iv) from about 0.1 weight percent to about 10 weight percent boric acid component or boron-containing compound.

28. (New) The method of claim 23 wherein the silane binding agent is an epoxy-functional silane.

29. (New) The method of claim 23 wherein the formed layer provides, up to 9,000 mg/ft² of coating on the substrate.